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ENVIRONMENTAL QUALITY

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12 August 1981

WORLDWIDE REPORT ENVIRONMENTAL QUALITY

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BRIEFS

AFFORESTATION IN KULEKHANI AREA--Kathmandu, July 11--Assistant Minister for Forest and Soil-conservation Deep Bahadur Singh initiated afforestation programme at Dadagoan Dam Site in Kulekhani Village Panchayat on the occasion of the forest festival today, reports RSS. Officials of the Forest and Soil-conservation Ministry and Kulekhani Hydel Project and local panchas participated in the programme. Thirty-five thousand different variety of trees will be planted in fourteen hectares of land at the site under the week-long programme, it is learnt. There is a programme to plant about fifty-three thousand trees in twenty-one hectares of land in Chitlang and Kulekhani Village Panchayat areas this year. It is expected that the afforestation will help flood control and soil erosion in the Kulekhani hydel power project area. [Text] [Kathmandu THE RISING NEPAL in English 12 Jul 81 p 1]

CSO: 5000/4927

PEOPLE'S REPUBLIC OF CHINA

PROGRESS ON POLLUTION CONTROL IN BEIJING DESCRIBED

Beijing Lumber Mill

Beijing BEIJING RIBAO in Chinese 5 Jun 81 p 2

[Article by Jin Ruilian [6855 3843 5571] and Lou Yaohua [1236 5069 5478]: "Beijing Municipal Lumber Mill Develops New Vacuum Cleaner and Solves Sawdust Pollution"]

[Text] The Beijing lumber mill has built two sets of a "two-stage bag-type vacuum cleaner" device which has effectively solved the pollution of sawdust and changed the past practice of shifting pollution from one place to another.

Ever since this plant began mechanized processing of lumber in the early 1950's, sawdust pollution had been a bad problem which had seriously jeopardized the workers' health. In 1958 the plant acquired a dust vacuum and regularly vented outdoors the sawdust around the workplace. Although this improved conditions in the shop, the sawdust that was sucked out polluted not only the plant grounds but also the nearly residential area. In the spirit of the four directives of the Central Committee Secretariat, and based on taking a responsible attitude toward the people's health, the plant in 1980 formed a team to develop a new dust vacuum cleaner. After more than 4 months of experimentation, the "two-stage bag-type vacuum cleaner" was successfully developed last November. This vacuum device uses a dust extractor in the first stage of handling the sawdust and separates the larger pieces. A "bag" is then used in the second-stage process of [handling] the sawdust and the regular dust; the sawdust is fed into a sawdust tower, while the regular dust is fed into a closed dust-fallout room. This new vacuum cleaner is 97 percent efficient and has had good results in service. It has fundamentally solved sawdust pollution to the environment indoors and outdoors.

Woolen Shirt Factory

Beijing BEIJING RIBAO in Chinese 5 Jun 81 p 2

[Article by Tang Naihui [0781 0035 1979]: "Beijing Woolen Shirt Factory Builds Pollution Control and Main Body Engineering Simultaneously"]

[Text] The Beijing woolen shirt factory is building pollution control facilities simultaneous with plant construction and has achieved concurrent sewage treatment and product manufacture.

Located in the northeastern suburbs of the capital, the Beijing wollen shirt factory is a newly constructed woolen textile mill that has the capacity for spinning, knitting, and dyeing. According to the designed production capacity, this plant will dump 600 to 700 tons of highly polluted sewage every day. At the outset of plant construction, the Textile Bureau and the company both made it clear that if the wastewater was not treated well, the dyeing and processing shop would not be allowed to start up. The factory paid great attention to pollution-control work and made it the exclusive responsibility of a deputy director. A wastewater management team consisting of leading cadres, workers, and engineering technical personnel was organized. With the assistance of students and instructors of the Water Supply and Drainage Department at Qinghua University, "biological turn disk" and "chlorine discoloration" methods of treatment were decided upon after investigation, research, and scientific experimentation. In order to move the progress of the water treatment engineering project ahead of the production of the dyeing and processing shop, the factory's power department in charge of water treatment moved full speed ahead and ensured that the construction would progress normally. Once the sewage treatment facility is put into operation, the treated wastewater will meet national emission standards, and the simultaneous design, construction, and production of pollution control and main body engineering will be realized.

Beijing Airport

Beijing BEIJING RIBAO in Chinese 5 Jun 81 p 2

[Article by Song Yunxiao [I345 0061 7197]: "Beijing Airport Controls Pollution During Expansion Construction"]

[Text] Being sensitive to overall considerations, Beijing Airport has made serious efforts to control pollution during its expansion construction and achieved good results.

The recent expansion engineering project of Beijing Airport was fairly large, and after expansion the amount of production and human sewage released by the various units was to be three times the previous level. If this sewage were released directly without treatment, it would cause pollution in Wenyuhe. The airport leadership realized the seriousness of the problem and decided to implement the national regulations thoroughly by putting great efforts into sewage treatment during expansion construction. The Beijing Municipal Institute of City Design and construction workers responsible for the project worked hard for several years and finished a sewage treatment area that treats 10,000 tons of sewage per day at the same time that the first stage of the expansion project was completed and put into operation. After precipitation and biological gas exposure treatments, the water quality of the sewage has been found to meet the national emission standards. However, the sewage treatment area must release a certain amount of sludge that is contaminated with bacteria and hazardous material. If this sludge is not treated, it can also cause pollution. Based on the spirit of being responsible to the people, the airport built an integrated utilization facility to treat the sludge and produce methane gas. The treated sludge can be used as agricultural fertilizer, while the methane gas produced can be used in the boiler room at the sewage treatment grounds and as fuel in kitchens.

9698

CSO: 5000/4080

BEIJING VIRTUALLY COMPLETES INTEGRATED WATER SUPPLY, DRAINAGE SYSTEM

Beijing BEIJING RIBAO in Chinese 22 Jun 81 p 1

[Article by Wang Yonghua [3769 3057 5478] and Xie Lianshan [6200 6647 1472]: "City Has Virtually Completed Construction of Water Supply and Drainage System To Win Victory Over Two Consecutive Years of Severe Drought and Assure Bumper Agricultural Harvests and Water for the City's Use; Numerous Water Conservancy Projects Completed Since Founding of People's Republic"]

[Text] As of June, the Beijing area has had 23 consecutive months of drought such as has not been seen in 100 years. Total precipitation last year amounted to 55 percent of the average amount for many years, and again this year it has been "scant rains and passing winds," as the drought seems to intensify. Nevertheless, in a year of great drought, there has been no great decline in production. Last year the city's agriculture had a great bumper harvest, total grain output surpassing all-time high records. Electric power, steel, and other industries that consume large quantities of water maintained normal production, and the lives of the people in cities and towns were unimpaired.

This good situation is directly attributable to the great accomplishments on the city's water conservancy battlefield. In the 32 years since founding of the People's Republic, the city has built 84 large, medium, and small reservoirs with a capacity totaling 7.2 billion cubic meters under the brilliant leadership of the party. It has also built 53 large and medium water gates, 44 irrigation areas of more than 10,000 mu, has machine-equipped more than 35,000 wells, has set up 6,300 pumping stations, and built more than 480 dams across streams. It has built 84 hydroelectric power stations with a total installed capacity of more than 28,500 kilowatts. It has built the Yongding River water diversion and the Jingmi water diversion projects, great arteries for supply of water to the capital city, which total 230 kilometers in length. It excavated and dredged more than 670 kilometers of drainage ditches for the prevention of floods. Throughout the city, a rather complete water supply and drainage system has been substantially built.

Beijing, located on the northern fringe of the North China Plain, is an arid region in which the distribution of precipitation is extremely uneven. Not only does the quantity of precipitation differ from one year to another, but there are very great variations in the seasons as well. In most years there is spring drought and autumn floods. In this capital city with a history approaching 1,000 years, even though successive dynasties of rulers built some water diversion and flood

prevention projects in order to maintain their rule, they never solve the problem of drought disasters. Up until the time of Liberation, the city of Beijing was dependent on a single watercourse running from Yuquan Shan carrying spring water into the city. It supplied only 100,000 cubic meters each day. At that time, bodies of water such as Shishahai, Beihai and Zhongnanhai lacked adequate sources of water and were stinking and filthy places that propagated mosquitoes and flies. The water in Shishahai was so shallow, rice could be grown in it. The Yongding River, on the other hand, frequently flooded causing calamities and bringing untold hardships for the people on both its shores. Within a month after the founding of New China, the CCP Central Committee decided to build the Guanting Reservoir. Between 1952 and May 1954, China's first large reservoir, the Guanting Reservoir, was victoriously completed. From this time forward, the unbridled havoc-wreaking Yongding River generated electricity, irrigated, and provided water to the capital, and created wealth for the people. Next, the Shisanling, Huairou, and Miyun reservoirs were also completed one after another. Party and leadership comrades including Mao Zedong and Zhou Enlai personally visited these reservoir worksites on numerous occasions to examine design programs, understand the projects, and join in labor at the worksites.

The capital's water conservancy construction greatly strengthened the capacity of the suburbs to fight drought and drain away flooding, promoting development of agriculture, forestry, animal husbandry, and fisheries. The irrigated farmland area of the suburbs expanded to 5.11 million mu, a 23 fold increase over the period immediately following Liberation. Thanks to assured water resources, industrial and urban construction also developed. Since the time of their construction, the two large reservoirs have supplied more than 40 billion cubic meters of water to industry and the city. Currently the city's water conservancy resources are unable to keep up with the needs of development of the four modernizations; water for the use of industry and agriculture is in fairly short supply; and some weak links exist in flood prevention and the draining away of flooding. This will require continued strengthening of water conservancy construction and management.

9432

CSO: 500/4085

MORE EFFORTS URGED TO PROTECT ENVIRONMENT NOW

Guangzhou HUANJING [ENVIRONMENT] in Chinese No 5, 30 May 81 pp 2-3

[Article by Wei Zonghua [7614 1350 5478] of the Environmental Protection Office of the Ministry of Metallurgical Industry: "Much Can Be Done To Protect the Environment During the Readjustment Period"]

[Text] In the current national economic readjustment period, some of the comrades engaged in environmental protection work take the view that since the state has cut back on the capital construction front, environmental protection work cannot get going and there is not much that can be done about it. Is readjustment strengthening or weakening environmental protection? Is it beneficial or detrimental to environmental protection? Practice at Shengyang refinery provides answers to these questions.

Shengyang refinery is an old plant built in the 1930's that was notorious for polluting in the northeast. Pertinent departments warned the refinery long ago that it would be booted out of Shengyang City if it did not make a serious effort to control its pollution. Whenever pollution control was discussed in the past, officials at the refinery could only think in terms of large-scale rebuilding and remodeling, and they requested that the authorities allocate 60 million yuan for it. In 1979, they consulted domestic and foreign advanced experience, took measures to strengthen production technology management and economic management, and promoted environmental protection work. They have not only stopped releasing substandard sewage and avoided paying pollution fines, but they have also recovered sulphur dioxide from the waste gas in order to produce sulphuric acid. They produced 88,000 tons of sulphuric acid in 1979 and 113,000 tons in 1980. Moreover, their production level continued to grow in those 2 years: the value of production grew an average 7 percent annually, and the gross production value increased 11.4 percent. During 1979 and 1980, the refinery completed 16 environmental protection engineering projects in conjunction with a major remodeling. Out of the total investment of 15.13 million yuan, the state invested 2 million and refinery [officials] raised 13.13 million yuan on their own. In other words, Shengyang refinery linked production development, renovation, and improvement funds, major remodeling funds, and integrated utilization profits in its environmental protection work.

When we asked the plant director why are they doing this, he said: "The major problem we are facing is environmental protection. If we don't protect the environment, our plant will no longer be in a position to continue to exist." Some people often

say that since production is tight and money is scarce, where do we get the power to protect the environment? Changes at Shengyang refinery have refuted this argument. And this is the microscopic example of one plant.

From the larger view of things, the Ministry of Metallurgical Industry in the past worked on environmental protection for the sake of environmental protection and tried to simply control the "three wastes." They spent much effort without achieving any pronounced effect. Since the national economic readjustment, we have begun to combine environmental protection with production and to think about how we can change the direction of metallurgical production. For instance, how can we make the growth rate of rolled steel faster than that of smelted steel and make smelted steel grow faster than smelted iron? That is to say, in the production of 1 ton of rolled steel, if the amount of cast iron required can be greatly reduced, the energy consumption and hence the pollution can both be reduced. The Ministry of Metallurgical Industry is a big consumer of energy. More than 70 million tons of standard coal are consumed for steel and iron alone every year. The ministry made a great effort the previous 2 years. In comparison with 1978, 1.11 million tons of coal were saved in 1979; yet steel production increased by 2.7 million tons. Coal consumption did not increase in 1980, but steel production increased by 2.6 million tons. In 1980, the coal consumption per ton of steel in major enterprises was 100 kilograms less than the 1979 level. In other words, the amount of smoke and gas released into the atmosphere by the metallurgical industry in 1 year decreased by about 30 billion cubic meters. As for the production structure, in 1980 we shut down, stopped, combined, or transformed a number of small steel mills that had a high energy consumption, high costs, and serious pollution problems. This year all small iron mills that consume more than 800 kilograms of coke per ton of iron and that cost more than 250 yuan will be shut down. This will greatly reduce the sources of pollution and will improve the environmental picture of the metallurgical industry.

Since the environmental protection problem accompanied modern industrial production, it must be solved step by step through economic development. Our past efforts of isolated "three wastes" management actually amounted to not seeing the forest for the trees. Only when environmental protection work is combined with production and integrated into the entire industrial system and into the production of the enterprises can it develop along with economic construction and be mutually promoting. It is therefore my belief that the period of national economic readjustment is favorable for us to adjust the unharmonious relationship between production development and environmental protection. We should make use of this golden opportunity to strengthen the basic work of environmental protection. Pessimistic arguments are unfounded.

9698

CSO: 5000/4081

CHINA'S FIRST REMOTE SENSING OF ENVIRONMENT DESCRIBED

Guangzhou HUANJING [ENVIRONMENT] in Chinese No 5, 30 May 81 p 8

[Article by Zhang Shuyi [1728 2579 5030] of the Tianjin Municipal Environmental Protection Bureau: "China Has Conducted Its First Environmental Remote Sensing Test"]

[Text] An enormous "composite city map by infrared scan" recently appeared on the wall in the big hall of the Tianjin Municipal People's Government. This map provides visitors with an overall view of the coastal city, and it is one of the encouraging achievements of China's first environmental remote sensing.

What exactly is environmental remote sensing? We have all heard about the many specific measurements and detections of the earth's surface and the surfaces of other planets by airplanes, artificial satellites, and spacecraft using photography, radio-waves infrared, laser beams, and so on. This is the remote-sensing technique. When remote sensing is used to monitor the environment, it is called environmental remote sensing. From spring and summer to the winter of 1980, 49 units, including the Chinese Academy of Sciences and the State Environmental Office, collaborated in China's first large-scale integrated scientific experiment based principally on environmental monitoring over the urban area of Tianjin and the Bohai Bay area. The experiment, known as the "Jin-Bo region environmental aerial remote sensing tests," yielded good results.

This environmental remote sensing is based mainly on regional scanning and infrared photography by airplanes flying at an altitude of 600 to 1000 meters. Thousands of infrared images of 1/5000 and 1/10,000 ratio are then superimposed, synthesized, and analyzed to obtain a clear picture of the environmental conditions of the atmosphere and water and the pollution sources in the Tianjin-Bohai Bay area. Simultaneous with the flight observations, synchronous measurements of ground object spectroscopy, thermal radiation characteristic observations, and water chemistry sampling were also carried out on the ground and in Bohai Bay. In certain sectors of the city, samples of atmospheric floating dust and of sulphur dioxide, as well as gas-dissolving gel vertical samplings, were also taken. In Bohai Bay, experiments on petroleum pollution diffusion, red tides, and chlorophyll content were carried out, and great volumes of pictures, data, and samples were systematically taken. If conventional methods had been used, it would have been difficult to obtain this information even with many years' work.

The recent environmental remote sensing has had many achievements. First, major pollution sources in the area are clearly indentified. The "hot islands" of industrial zones and the thermal pollution of steel mills are all graphically displayed. A certain petroleum refinery had hidden its pollutant outlet underground and had escaped attention for years, but that too is revealed under the observant eye of aerial remote sensing. Second, the pollution conditions in the atmosphere and water are revealed graphically and instinctively. The white color representing dust pollution and the dark blue color representing the diffusion of ground sewage in the bay are all clearly displayed. Moreover, these pictures also reflect the anomalous pollution of suburban agriculture and the green areas, traffic, and buildings of the city, thus providing a scientific basis for urban construction and management. After this environmental remote-sensing activity, people have further come to realize that remote sensing is indeed the modern ears and eyes of environmental protection, and that it is really a handy tool for carrying out environmental monitoring and quality evaluation and management of the environment.

9698

CSO: 5000/4081

GOVERNMENT WITHDRAWS 7,000 HECTARES FROM NATIONAL PARK

San Jose LA NACION in Spanish 17 Jul 81 Sec A p 8

[Text] By virtue of an executive order, the government withdrew 7,000 hectares from the Palo Verde National Park, despite strong opposition to that measure from the various conservationist groups.

Unofficial reports which came to the attention of the conservationists several days ago disclosed that some 4,000 hectares were to be withdrawn from the park.

However, the measure adopted by the president of the republic, Rodrigo Carazo Odio, and the minister of agriculture, Dr Hernan Fonseca Zamora, stipulates that the area to be withdrawn will consist of 7,000 hectares.

Yesterday, the conservationists announced that they would bring administrative legal action against the state to prevent the withdrawal from the park.

They would base that suit on the fact that (according to the view of the attorneys advising them) national parks can undergo withdrawal only through the passage of a law.

It was learned that engineer Mario Boza, President Carazo's adviser on national parks, will resign from his position in reaction to the reduction in the park area.

His close friends claimed that he has at his residence the letter of resignation from his post, and that he will submit it to the president, possibly upon his return from a visit that he is making to the Cahuita area.

Until 2 days ago, the Palo Verde National Park consisted of 9,466 hectares of dry tropical woods, unique in the Central American area; which are also visited by thousands of species of migratory birds during various seasons of the year.

In accordance with the new decision, the park will be comprised of only 2,440 hectares.

Decision

The executive branch made the decision to reduce that park on the basis of a declaration from the Office of the Attorney General of the Republic.

The declaration was prepared by Manuel Freer Jimenez, the third prosecutor of the republic, after receiving a legal opinion from Ana Maria Tato, legal consultant for the National Parks Service.

The document from the Attorney General's Office states that this park consisted of land which belongs to private individuals, and which could not be paid for by the state.

Freer Jimenez remarked that, according to the local legislation, privately owned land cannot "be held legally as an integral part of a national park, unless it is purchased or expropriated by the state."

He added: "If private land which the state does not wish, or is not able to purchase or acquire through expropriation, is included in an order for the creation of a national park, such land may be excluded from the boundaries set for the respective park, and that exclusion may be made through an executive order."

Order No 12765-A, which was published in the Official Journal yesterday, declares that the state will acquire a piece of property consisting of 2,440 hectares, by virtue of a legal instrument executed in the presence of the state notary's office.

It adds that this property guarantees fulfillment of the conservation goals which had prompted the decision to create the park, "because, not only are the 900 hectares of mangrove thickets and ponds protected, but a suitable additional setting is provided for them."

This assumption was repudiated by the conservationists, who consider it necessary to keep in the state's possession not only the 2,440 hectares described in the decree, but also the other 7,026 hectares, as was originally stipulated.

Reaction

Alexander Bonilla, an official of the Costa Rican Association for the Conservation of Nature (ASCONA), commented that the government's decision is a setback in the conservation of natural resources.

He said that this cut would evoke a series of national and international reactions, because the Organization of American States (OAS) and the United Nations (UN) have been requested to make a declaration against the reduction.

Similar declarations have also been asked of the conservationist organizations of Central America and Europe.

Moreover, the declaration by the Office of the Attorney General of the Republic prompted Ana Maria Tato to request of that institution a reconsideration thereof.

In doing so, she gave a reminder that, some time ago, Costa Rica ratified the Convention for Protection of Flora and Fauna and the natural scenic beauties of the American nations; and that this regulation notes that the boundaries of national parks are not to be changed, nor any part of them transferred, except through action by the legislative authorities.

She recalled that this convention holds a superior status in the legal code, and therefore should be complied with.

With regard to the proposition that privately owned land cannot be legally held as an integral part of a national park, unless it has been purchased or expropriated, the attorney remarked:

"That runs counter to the provisions of Article 71 of Law No 4461, which affords the possibility that privately owned woods or land considered essential to serve the purpose of establishing a national park may be subjected to the forest system, on a compulsory basis; and, in the event that the owners refuse to abide by that system, steps will be taken for expropriation...."

Nevertheless, the Attorney General's Office rejected the request for reconsideration, expressing the view that it should have been submitted by the minister of agriculture and livestock, Dr Hernan Fonseca, and not by the attorney, because he is superior in the chain of command.

The notion that the boundaries of national parks may only be expanded or reduced through a law of the legislative branch is also upheld by Jorge Enrique Romero Perez.

Romero claims that Article 13 of Law No 6084, of 16 August 1977, so stipulates, remarking: "Hence, the principle of legality often violated by this administration impedes such action on the part of the presidency of the republic."

He gave a reminder that it is regarded as a proven, actual fact that expropriation or the reversal of expropriation can be made only by law, and that "there are many who have undergone expropriation without having been paid, in addition to those affected by the government in the case of Palo Verde."

He added that the sums of money to be paid are ridiculous, in comparison with the large volume of the expropriations.

"That situation is so obvious that even an adviser from the Presidential Household of the Republic, engineer Mario Boza, stated in the press his opposition to the arbitrary conduct of the executive branch. What interests are afoot behind this new illegality of the present government?" the attorney wondered.

Minister

The minister of justice, Elizabeth Odio, for her part, commented that it is the unanimous view of the prosecutors of the republic that, on the basis of Article 45 of the Political Constitution and the local laws, a national park must be entered in the Public Registry in order to become part of the state's forest holdings.

However, she explained that, in order to make this registration possible, the property must be acquired through direct purchase or expropriation.

She said that, in the case to which the order relates, what existed was a confiscation, because no expropriation took place, nor was payment made to the owners of the land. She claimed: "The confiscation of a property is not allowed here."

She also emphasized the fact that there is no money with which to pay the owners for the property, and that it was for this reason that the decision was made to withdraw land from the park.

2909

CSO: 5000/2154

COUNTRY'S REFORESTATION CAMPAIGN SUCCESSFUL

Guatemala DIARIO DE CENTROAMERICA in Spanish 9 Jul 81 p 3

[Text] During the three years of General Lucas' government, the reforestation of the country has attained goals never before achieved by other governments, as evidenced by the results obtained under the National Reforestation Plan.

In order to satisfy the demand for plants all over the country, the National Forestry Institute has, over the last 3 years, produced and sown 91,892,163 seedlings of varied species, with an investment of thousands of quetzales.

The National Forestry Institute (INAFOR) currently depends on 173 nurseries, located in strategic areas of the country, to facilitate the reforestation.

The nurseries provide the species required by the ecology of each region, and preference is given to those areas which are marked for reforestation.

The reforestation effort is being carried out in a programmed fashion, and according to the needs of the country, principally in the river basins which feed the Republic's communities.

These projects are located in the river basins of the Xaya-Pixcaya River in Chimaltenango, with 392 reforested hectares; the Aguacapa River in Santa Rosa, with 699 hectares; the Grande River, Zacapa-Chiquimula, with 629 hectares; Cuilco River, Huehuetenango, with 295 reforested hectares; Pensativo II River, Antigua Guatemala, with 547; Suchiate River, San Marcos, with 920 reforested hectares; Teocinte River, San Jose Pinula, with 879 hectares; Chixoy River in Alta Verapaz, with 73 hectares; and the metropolitan area, with 505 reforested hectares.

The national reforestation campaign, vigorously fostered by General Lucas' government, has received the unrestricted support of district governing bodies, municipalities, teachers and students at all levels, but especially from the public and private sectors, which are realizing the need to implement projects in order to meet the great demands for energy, and to avoid environmental contamination.

In a futuristic move, the necessary guidelines have been created for the establishment of new nurseries for the production of plants over an area of 2,500 hectares, under the Lago de Amatitlan Conservation Project; communal forests for kindling; the reforestation of 270 hectares per year; and for the control and creation of national parks.

During this administration a national campaign against the pine mite was initiated, since it constituted a plague that was decimating the conifer forests, particularly in the western highland departments of the country. Work has been done to clear 10,000 hectares, an area of land which has been the object of restoration through reforestation.

With the goal of assuring that the natural resources will be used for the benefit of the country's inhabitants, INAFOR acted as consultant to such forestry cooperatives as San Juan Ixcoy in Huehuetenango; San Juan de Argueta, Solola; Llano de las Flores R.L. in Malacatancito, Huehuetenango; Chiclera del Estor R.L. in Izabal; and El Bosque in San Jeronimo, Baja Verapaz.

9730

CSO: 5000/2153

NPN ACCUSED OF CREATING BROWN, NOT GREEN REVOLUTION

Enugu DAILY STAR in English 11 Jul 81 p 2

[Article by Sam Chike in the column "Political Diary": "From Green to Brown Revolution"]

[Text] **L**ARGE acres of cassava farms and other crops were reported to have been destroyed at Okara inland in Ethiopia local government area of Bendel State.

About forty-five farmers who were believed to be anti NPN were said to be affected by the damage. Their farms were said to have been destroyed as a result of a massive bulldozing of lands by some leaders of NPN under the cover of the green revolution project.

Using the words of the Supervisory Councillor for Agriculture in the area, Chief M. D. Asini, the action of the leaders is a deliberate damage to our crops and an open display of political victimization.

The Green Revolution Programme is aimed at increasing food production and not the destruction of crops.

According to Chief Asini, if the Green Revolution Programme were to be genuine, they should have directed their attention to forests and virgin lands for cassava farms.

Yeah, Sam Chike agrees with what Chief Asini said. What the NPN is doing is no more green revolution but brown revolution. It is

using (NPN) starvation as a weapon. The new move is to starve opponents somehow into submission. All other moves to convert or buy the victims over into NPN have proved abortive so it will destroy their means of livelihood.

The members of NPN in Bendel State don't want the green plants to appear any more in the lands of their political opponents. They want their lands to be arid soil with little or no productivity.

The top soil is fertile. This is where we plant our crops to promote green revolution. But when we

dig deeper, we get unfertile

or eroded soil without sufficient nutrient for crops. This is what these NPN members are doing to punish their opponents but cover it up as promoting the green revolution.

The NPN has once more proven itself immature and incapable of handling the affairs of the nation.

One thing is to win at the election and another thing is to rule. Our people have been deceived by the 1979 election promises. The NPN has promised heaven and earth to the people and they thought they were sincere. That was why they

were voted into power. Now the people have realized that it was an empty boast.

The NPN needs some re-education. It seems not to know what it is doing. It is full of contradictions. A kingdom at war with itself will not stand.

Destroying the crops meant for promoting green revolution is going counter clock wise and destroying the development project of the Federal Government. We are one nation. We should be so treated. Differences in party affiliations do not mean that we are different nations.

USSR ENVIRONMENTAL LEGISLATION DESCRIBED

Moscow SOVETSKAYA ROSSIYA in Russian 5 Jun 1981 p 1

[Interview with O. S. Kolbasov, head of environmental protection sector of the Institute of Government and Law of the USSR Academy of Sciences, doctor of juridical sciences by V. Zhilyayeva and T. Il'ina, date and place not given: "Land of People"]

[Text] The "Main Directions for Economic and Social Development of the USSR for 1981-1985 and the Period to 1990" adopted by the 26th CPSU Congress focused a lot of attention on environmental protection. Closed systems of water use will be developed and introduced, protection of water sources from depletion will be strengthened and work will be continued for protection and efficient use of unique natural complexes.

Billions of people live on our planet. But throughout time nature has been and remains the only one for all of us. The welfare and very existence of mankind on earth depends on its condition. Specialists of all branches are now studying its protection. At the request of our correspondents, O. S. Kolbasov, head of the environmental protection sector of the Institute of Government and Law of the USSR Academy of Sciences, doctor of juridical sciences relates how law helps protection of nature.

[Answer] There are many laws on environmental protection in world law. The majority of them have been adopted in recent decades. The effect of human activity on nature has grown so much now that it needs precise legal regulation. Judge for yourselves. According to the data of the International Union of Protection of Nature and Natural Resources, as a result of soil erosion, use of lands in industry, power engineering, city construction, transportation and so forth, the dry land is being degraded at a rate of 44 hectares per minute. In this time 20 hectares of forests disappear. According to an estimate of the U.N. environmental program, the world uses 4 million artificial chemicals and every year 7000 new ones appear. Their application may have harmful biological consequences. The convention on international trade of species of wild fauna and flora that is threatened with extinction has information that trade of these species has reached giant scales.

The need for environmental protection has become urgent. The Soviet Union is therefore persistently strengthening, and expanding international cooperation so that the joint efforts of the nations will save the earth.

[Question] What environmental protection standards are stipulated by international law?

[Answer] A considerable number of these standards refer to spaces which are beyond the limits of the state territory, the World Ocean, atmospheric air and space. In particular, a number of conventions have been adopted to protect the sea from pollution with oil, solid wastes from ships, from oil fields and other developments of the sea bottom, and from dry land. Individual conventions have been adopted to protect individual regions, for example, the Baltic Sea. The agreement on the Antarctic is significant. It proclaims it as a unique scientific test site that is not subject to use for military purposes.

The international air law was previously linked to the use of this space for aviation communication. Now it also covers questions of protecting the atmospheric air from pollution. On the initiative of the Soviet Union, a convention was concluded in 1979 for transboundary air pollution great distances. It covers the countries of Europe, the United States and Canada. In December of last year, the U.N. General Assembly approved a draft resolution presented by the USSR "On the Historical Responsibility of States for Preservation of the Nature of the Earth for Today's and Future Generations." The USSR is the supporter of over 70 agreements and is the participant in over 60 international organizations involved in environmental protection.

[Question] How does the USSR cooperate with foreign countries in environmental protection?

[Answer] An eloquent example is the joint work of the scientific research and planning-design organizations of the member countries of the CEMA on the problem "Protection of the Atmosphere from Pollution with Harmful Substances." Here is a small list of its results. At the end of the last five-year plan, promising methods of purifying gas wastes of sulfurous anhydride were brought to industrial development. Technical documents were prepared for series production of highly efficient electric filters. Fabric dust-traps made of new materials have been successfully tested.

Interaction with some of the capitalist countries has recently become noticeably more complicated. On the initiative of the American side, scientific and technical Soviet-American cooperation in many directions was "frozen." However, this did not affect environmental protection. Last year the regular meeting of the USSR and U.S. specialists took place on legal and administrative measures of environmental protection.

Various laws are also adopted here and national governmental organizations have been set up for environmental protection. But the industrialists often ignore them. The U.S. oil monopolies, for example, required that the federal standards for the sulfur content in petroleum products be "softened" or postponed. The coal industrialists set as a condition for increased fuel extraction the abolition of standards for emission of sulfurous compounds into the atmosphere. The expensiveness of environmental protection measures justifies the rise in prices for goods.

[Question] What is the peculiarity of the legal environmental protection in the USSR?

[Answer] Our economic activity previously took into consideration measures for the protection and efficient use of natural resources, but starting in the 1970's, their mandatory planning was introduced. Practically every sector of nature use now has legislation of the USSR and the union republics, and the emphasis is on preventive requirements. Last year the Soviet Union adopted two such important laws. For the first time, an attempt was made for complex legal regulation in the USSR law for protection and use of the animal world.

Many countries have laws on protection of the atmosphere, but mainly from pollution by industrial and domestic emissions of dust, gases and vapors. Only the USSR law on protection of the atmospheric air stipulates any harmful effects on it, physical, chemical, biological, control of noise, harmful radiations, and effects on the weather and climate. Our country was the first in the world to establish maximum permissible concentrations for over 140 harmful substances in the atmosphere, and over 480 in reservoirs, and dozens of their combinations. These are the most stringent standards.

State ecological consultation of construction and economic projects and planning solutions are made extensively.

Strict measures have been legalized for responsibility for violation of the standards and regulations for the use of natural resources. Unfortunately, they have to be used often. The reasons for the violations are the lack of ecological knowledge, inability to use it in practice and insufficient monitoring. An orderly system of laws which permit protection of nature from any harmful factors has now been formed in Soviet law. But the river, forest and field cannot turn to us themselves for protection. "We have adopted many good laws, comrades," stated L. I. Brezhnev at the 26th Party Congress. "Now it is a matter of the accurate and steady implementation. Any law only lives when it is fulfilled, fulfilled by all and everywhere."

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CSO: 5000/32

ESTONIAN ENVIRONMENTAL, WILDLIFE PROTECTION LEGISLATION

Tallinn SOVETSKAYA ESTONIYA in Russian 12 Jun 81 p 3

/Speech of Ye. F. Filatov, chairman of the Commission for Nature Conservation and the Efficient Use of Natural Resources of the Estonian SSR Supreme Soviet, at the Third Session, 10th Convocation, of the Estonian SSR Supreme Soviet; abridged:
"On the Drafts of the Estonian SSR Law 'On the Protection of the Air' and the Estonian SSR Law 'On the Protection and Use of the Animal World'"/

/Text/ Dear comrade deputies! Among the most important problems facing mankind, the solution of which today has been placed on the practical level, is the problem of protecting the natural environment.

Under the conditions of scientific and technical progress and the rapid development of industry, transportation and agriculture, when powerful means of influencing nature have already been and continue to be created, the economical, scientifically sound use of its resources is becoming an urgent necessity.

"When taking steps to expedite scientific and technical progress," Comrade Leonid Il'ich Brezhnev said, "it is necessary to do everything so that it would be combined with a practical attitude toward natural resources and would not serve as a source of the hazardous pollution of the air and water and the exhaustion of land. The party is increasing the demandingness on planning and economic organs and design organizations, on all our personnel for the matter of the designing and construction of new and the improvement of the operation of operating enterprises from the point of view of conservation. Not only we, but also subsequent generations should have the opportunity to enjoy all the benefits which the beautiful nature of our homeland provides."

The questions of the protection of nature and the efficient use of its resources are nowhere being raised as extensively as in the Soviet Union. They have been at the center of attention of the Soviet state since the first days of its existence.

Lenin's ideas of the protection of nature and the most efficient, practical utilization of its resources find concrete embodiment in the policy of the Communist Party and in the activity of the Soviet state.

The new USSR Constitution, as well as the Estonian SSR Constitution, which proclaimed that in the interests of the present and future generations the necessary steps are being taken in our country for the protection and scientifically sound,

efficient use of the land, its mineral resources, the plant and animal world and for keeping the air clean, expressed most thoroughly the principles of the socialist attitude toward nature.

The achievements of the Soviet state in the area of economics are creating a firm basis for the implementation of large-scale measures which are aimed at the protection of the natural environment. During the 10th Five-Year Plan alone more than 50 million rubles of state capital investments were allocated for these purposes in the republic. Production associations, enterprises, kolkhozes and sovkhoses are allocating considerable capital for conservation needs.

The scientific system of the efficient use of nature is constantly being improved. It is being widely adopted in conformity with the state plans of economic and social development in all the sectors of the national economy.

Soviet legislation is playing an important role in the matter of the protection of nature and the efficient use of its resources. The land, water and forest codes and the code on mineral resources, which were adopted by the Estonian SSR Supreme Soviet, as well as the decisions of the party and the government on questions of the intensification of the protection of the natural environment have created the necessary conditions for a more correct, practical attitude toward natural resources.

The drafts of the Estonian SSR laws "On the Protection of the Air" and "On the Protection and Use of the Animal World," on which the Legislative Proposals Commission, the Industry Commission, the Agriculture Commission and the Commission for Nature Conservation and the Efficient Use of Natural Resources of the Estonian SSR Supreme Soviet, which examined the mentioned drafts in advance, commissioned me to report to you, have been submitted for discussion to the current session by the Estonian SSR Council of Ministers.

In conformity with the decisions of the Central Committee of the Communist Party of Estonia and the Estonian SSR Council of Ministers much was done in the republic during the years of the 10th Five-Year Plan to improve the air basin. Planned measures on the improvement of technological processes, the improvement of the operation of existing and the construction of new gas, ash and dust traps and the further changeover of apartment and public buildings and enterprises to central heating were implemented.

As a result of the taken steps the level of air pollution in the republic stabilized and in places decreased. It is a pleasure to report that in the city of Kokkila-Yarve, which is located in the most polluted air basin in the republic, at present the air has become much cleaner than it was at the beginning of the 10th Five-Year Plan.

Measures aimed at stepping up the protection and improving the use of the animal world are also being consistently implemented.

The ministries and departments, scientific institutions and scientists of the republic took an active part in the preparation of the bills on the protection of the air and on the protection and use of the animal world. They were drafted on the basis of the provisions of the USSR Constitution and the Estonian SSR Constitution, the decisions of the party and the government on the indicated questions.

These documents will be an integral part of the unified system of conservation legislation. The importance of these bills is obvious. The air and the animal world are among the main components of the natural environment.

The bills being discussed today are called upon to improve the legal regulation of the relations connected with the protection of the air, the protection and use of the animal world, to bring the legislation in effect in this area into the system and to fill the gaps in it.

These documents contain the fundamental, most basic decisions on the corresponding questions. The republic legislation on the protection of the air and the protection and use of the animal world will be developed and improved in the future on the basis of the new laws.

The bills in question are based on the uniform principles of the socialist use of nature.

The drafts proceed from the fact that the measures in the area of the protection of the air, the protection and use of the animal world have been placed in our country on a planned basis.

The drafts assign an important place to questions of the state monitoring of the protection of the air, the protection and use of the animal world. The goals and tasks of state and departmental monitoring, the duties and rights of the organs carrying out the monitoring are specified. Extensive economic organizational and supervisory powers are granted to the local soviets of people's deputies.

The bills reflect the policy being consistently pursued by our party of the utmost enhancement of the role of public organizations and citizens in solving state problems. The principle that trade unions, organizations of young people, societies for the protection of nature and other public organizations, as well as citizens are called upon to assist state organs in implementing measures on the protection of the air basin and on the protection and use of the animal world, is set down in them.

The establishment of liability for violations of the legislation on the protection of the air and on the protection and use of the animal world is called for in the drafts.

The draft of the Estonian SSR Law "On the Protection of the Air" contains a number of fundamentally new regulations which are aimed at stepping up the protection of the air against pollution and other harmful influences. Requirements on the establishment for each source of standards of the maximum permissible discharges of pollutants into the air and the harmful physical effects on it are envisaged in the law.

The introduction of these standards will make it possible to perform more purposeful work on the reduction of harmful emissions into the air, will increase the responsibility of the executives of enterprises and organizations for keeping the air clean, as well as will ensure the more effective monitoring on the part of the appropriate state organs of the implementation of measures on the protection of the air against pollution.

An important place in the draft is assigned to preventive measures in the area of the protection of the air. It is intended that when siting, designing, constructing and putting into operation enterprises and other facilities the strict observance of the standards of harmful effects on the air will be ensured. At the same time the trapping, recovery and neutralization of harmful substances and waste products, as well as the meeting of other requirements on the protection of the air should be envisaged.

It is stipulated that in cases of the impossibility of reducing the emissions of pollutants and the harmful physical effects on the air to specific standards the corresponding enterprises, structures and other facilities are closed or their production specialization is to be changed.

Much attention in the draft is devoted to the prevention of harmful physical effects on the air. The duty to elaborate and implement measures on the prevention, reduction and elimination of the harmful effect on the air of audible vibrations, including noise, radiations and the like, is placed upon the local soviets of people's deputies, enterprises, institutions and organizations.

The bill also contains a number of other provisions which are aimed at increasing the protection of the air.

The draft of the Estonian SSR Law "On the Protection and Use of the Animal World" solves a set of problems connected with the concern about the protection and proper use of the wild animals which live in a state of natural freedom.

In the draft it is specified that the questions of the use and protection of agricultural and other domesticated animals, as well as wild animals kept in captivity or under semifree conditions, are settled by other legislation.

The animal world in the Estonian SSR, as is emphasized in the bill, is state property--the common property of all the Soviet people. The main demands on the protection and use of the animal world are specified in conformity with this. It is stipulated, for example, that when planning and implementing measures, which might influence the state of the animal world, the preservation of the species diversity of the animals and the protection of the habitat and integrity of their natural communities should be ensured.

In the bill a classification of the types of use of the animal world is given, among which there are mentioned: hunting, fishing, the use of the animal world for scientific, cultural educational, instructional and esthetic purposes and others.

Here it is indicated that the state, cooperative and other public enterprises, institutions and organizations, to which hunting grounds and fishing tracts of hatchery water courses are offered for use, are obliged to implement comprehensive measures on the protection and reproduction of wild animals.

Special measures on the protection of rare types of animals and types threatened with extinction are called for. A number of regulations on the protection of animals when using means of protecting plants, stimulants of their growth, mineral fertilizers and other compounds are being introduced. The arbitrary resettlement and acclimatization of animals are prohibited.

The procedure of the state registration of animals and their use, as well as the rules of the making of a state survey of the animal world are specified in the draft.

It can be confidently stated that important and necessary documents, which along with the previously passed laws will ensure the protection of nature and the optimum use of its resources, have been prepared. However, the large amount of purposeful work, which is connected with the practical solution of the problems of protecting the air, protecting and regulating the use of the animal world, does not end with the passage of these laws; rather, only a new stage of the work begins.

It is recommended to put the laws "On the Protection of the Air" and "On the Protection and Use of the Animal World" into force on 1 October 1981, so that the ministries and departments, on which the duty of settling the indicated questions has been placed, could successfully prepare the appropriate legislative acts.

Comrade deputies!

Let me express confidence that the new laws will be approved by the population of the republic.

They will unquestionably promote the improvement of the operation of enterprises, institutions and organizations and will increase their responsibility for the solution of the problems of the protection of the air and the judicious use of the resources of the animal world.

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CSO: 5000/29

ISSYK-KUL' LAKE POLLUTION CONTROL PROBLEMS

Frunze SOVETSKAYA KIRGIZIYA in Russian 9 Jun 81 p 4

/Interview with Rimma Konstantinovna Belousova, chief of the Administration for the Regulation of the Use and the Conservation of Water of the Kirghiz SSR Ministry of Land Reclamation and Water Resources, by SOVETSKAYA KIRGIZIYA correspondent L. Zholmukhamedova; date and place not specified: "Around the Lake"

/Text Architects, physicians, engineers and sociologists are working on the problem of the rational zoning and improvement of sanitation of the Issyk-Kul' shore. Much has been done. But the discharges of harmful substances into the natural environment, which are connected with the industrial and agrarian activity of man, are still large.

Our correspondent met with R. K. Belousova, chief of the Administration for the Regulation of the Use and the Conservation of Water of the Kirghiz SSR Ministry of Land Reclamation and Water Resources.

/Question Rimma Konstantinovna, what problems, in our opinion, require the most immediate solution?

/Answer The problem of transporting petroleum products worries me first of all. Yes, we have renounced oil tankers which scurry over the water area of the lake. But in exchange we have gotten an enormous number of gasoline tankers, which uninterruptedly run over the route from Rybach'ye to Przheval'sk and back. There is no place in either city to wash the gasoline tankers. And the drivers customarily "brake" at the numerous streams which, as is known, run into the lake. That is why laboratory studies show only a negligible decrease of the pollution of the lake with petroleum products.

/Question But, when replacing the fleet by motor transport, was it not necessary to foresee this?

/Answer Of course. We started working immediately. We built a mechanized washer with recirculating water supply at the Rybach'ye Passenger Motor Transport Depot. We built a service station in Przheval'sk. It would seem that all the problems were solved. But here it is necessary to recall the notorious "however." So then, however in Przheval'sk the station is idle owing to serious construction

defects, while in Rybach'ye during the first winter the pipes burst from the cold: they "had the sense" to build the washer in an outdoor design. How much effort and capital were expended and all in vain. Incidentally, I recall how ideal the idea of such a washer is: whereas 700 to 1,000 liters of water are required for washing each vehicle, in the washer it is possible to wash all the vehicles with the same water, with the same liters. The washer "sorts out" very well the dirt, oils and water. Incidentally, the same oils, perhaps, after slight reprocessing can be used for boiler houses.

/Question/ Incidentally, who is carrying out the construction of the conservation facilities?

/Answer/ Mainly the Ministry of Construction and the Ministry of Rural Construction, other ministries and departments are also being involved. But I cannot recall another such case, when if just one tank could be immediately received. Many leak, it is necessary without fail to finish many. In the Issyk-Kul' area it has long been time to set up a specialized organization for the construction of treatment plants. Let us assume that if just one construction and installation administration of the Issyk-Kul'stroy Trust were specialized. It would also perform the start-up and adjustment work when erecting compact treatment plants, all the assets would be concentrated here, and it would be possible to use them with greater effectiveness.

/Question/ But, as I understand, do not many defects begin with the designers?

/Answer/ Many do. Many planning and design technological bureaus do not keep in mind that the submission of the designs of conservation projects to water inspection organs for approval is extremely necessary. That is how they built the outdoor washer in Rybach'ye. That is how they built the treatment facilities at the Anan'yev Cheese Plant. They were built according to the design of the planning and design technological bureau of the Ministry of the Meat and Dairy Industry. They began building them back in 1975, but when they will begin to operate, I cannot say even roughly. The sewage of the plant is saturated with protein, and during its purification enrichment with oxygen is mandatory. Only then do the chemical reactions and the breakdown into clean water and sediment begin. The designers proposed to construct an aeration tank--a concrete canal up to 2 m deep--with a mechanical rotor, which, in their opinion, should have supplied oxygen here. And the rotor "supplies" by scooping only 15-20 cm of the flow. Such a set-up is fine for household sewage and for small aeration tanks. Here it is clearly out of place. Blowers are needed to correct the situation, but this again means money, which there is no place to get. The designers make a heap of errors when laying out the water supply and sewage systems.

Standard treatment plants designed for northern regions were built at the Przhval'sk Slaughtering and Sausage Center according to the plan of the same planning and design technological bureau. Whereas in Rybach'ye the washer is idle because it is outdoors, here, on the contrary, the aeration tanks are sealed tight. And the effluents entering them, honestly, are cleaner than the outgoing "treated" effluents. The enterprises of the Ministry of the Meat and Dairy Industry are a real scourge for the natural environment of the Issyk-Kul' area.

The treatment plants for the city of Przheval'sk were under construction for 11 years. They have been completed. In January of this year the commission accepted them. I believe I would not surprise you if I said that they are also idle today. And again there are errors in the design, construction flaws. The city soviet executive committee is not concerned enough with the development of the sewer system.

/Question/ Rimma Konstantinovna, situations, when the orders of the water inspection organs are brushed aside, today are probably already rare. But what, besides fines, can the water inspection organs use against those guilty of polluting the natural environment?

/Answer/ Yes, fines, unfortunately, are not always effective. But we do have another means. We send to the funding organizations information about the fact that the administration of a certain enterprise is not fulfilling the orders of the inspection organs and it is inadvisable to pay them bonuses (and these amounts are often considerable). So in recent years they have been trying not to come into direct conflict with us. The time has passed when it was simply possible to turn one's back on treatment plants, by using more important matters as a cover.

/Question/ But there is also another, not necessarily conflictive, means of evading orders. For example, while agreeing with the objective necessity, is it not possible "to bide one's time"?

/Answer/ Back in 1977 the republic government adopted a decree on moving the sheep pens from the shore of the lake. It was a question of 65 sheep pens. And, since this matter was difficult, they "spread" the move over years. They gave time for steps to be taken. For example, in 1977 3 sheep pens were to be moved, in 1979—22. In reality in 1977 not one was moved, in 1979 only 10 were. In all 26 sheep pens have been moved. It was proposed to construct dams and treatment plants at some farms. So far this has been done only in Tyupskiy and Dzhety-Oguzskiy Rayons, and then at far from all the farms.

/Question/ This year many organizations and enterprises were faced with the fact that their holiday hotels "suddenly" closed. Is it likely that this should nevertheless have been expected?

/Answer/ Of course, this did not at all occur suddenly. The Rybach'ye Ship Repair and Shipbuilding Plant is preparing compact treatment plants, which have proven themselves to be excellent and are especially necessary for holiday hotels. But the ministries and departments are in no hurry to redeem and install them, hoping for the customary "off-chance." The off-chance will come to pass. At present 18 compact plants are in operation on the shore, but more than 60 are necessary. Moreover, a single plant can serve two or three holiday hotels. The water treated by the compact plants can be used for watering the gardens and flower beds of the holiday hotel. Hygrophilous nut groves can be planted around the compact plant. But for the present, unfortunately, at many holiday hotels they are getting by with the "ancient" method: they build concrete cesspools, the contents of which are hauled away to certain sites. And although such effluents do not enter the lake directly, they enter it indirectly, through underground springs. In short, such holiday hotels are potential polluters.

A schedule of when what holiday hotel is to acquire a compact plant has been drawn up. Those that have violated it are now forced to say that here, they say, the holiday hotel was "suddenly" closed.

And, incidentally, I cannot but speak about private motor transport, which people continue to wash in the rivers. They know this must not be done, but they wash them, fleeing at the critical moment from the inspectors of the Issyk-Kul' Basin State Water Inspectorate.

Very many questions still have to be solved in protecting the rare natural environment of the Issyk-Kul' area. But these questions are not among the insoluble ones. It is necessary just to roll up one's sleeves and start working with all the responsibility.

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CSO: 5000/30

EARTHQUAKE PROTECTION IN GEORGIAN COAL MINES

Tbilisi ZARYA VOSTOKA in Russian 7 Jun 81 p 2

/Article by Georgian State Prize Winner and Candidate of Technical Sciences Yu. Tsintsadze, director of the All-Union Scientific Research Institute of Labor Protection of the AUCCTU: "The Force of Shallow-Focus Earthquakes"/

/Text/ An enormous portion of the capital investments are being invested in the mining sector. And this is natural: the demand for natural raw materials is increasing with each year.

"The extractive sectors as a whole, apparently, must also be approached in a new way," General Secretary of the CPSU Central Committee Comrade L. I. Brezhnev emphasized while speaking at the 26th CPSU Congress. "...the means for this is the acceleration of scientific and technical progress, the complete, thorough processing of minerals, the more extensive use of secondary resources."

Serious problems on this level face the republic coal industry. At the 26th Congress of the Communist Party of Georgia it was noted that a very undesirable tendency for coal production to decrease, especially at the Tkibuli-Shaorskiy deposit, which is the main fuel base of the Georgian SSR, has been noticed here in recent times. The working of this deposit involves the solution of a number of scientific and technical problems, among which the questions of controlling such complex dynamic phenomena as mine shocks, outbursts of coal and gas and so on are, occupy an important place. Such phenomena are always a danger for miners, and especially under the conditions of the Tkibuli-Shaorskiy deposit, since here nature literally tried to unite all the undesirable geological mining parameters--a great depth of the working of the coal seams, thick and surrounding rock, a considerable degree of tectonic disturbance, the mountainous topography and seismicity of the region.

The working of the Tkibuli-Shaorskiy deposit has also been complicated from the standpoint of the safe performance of mining. Precisely for this reason the new work "Razrabotka i vnedreniye spetsial'nogo kompleksa mer po bezopasnosti i effektivnoy obrabotke moshchnykh udaropasnykh plastov uglya Tkibuli-Shaorskogo mestorozhdeniya v seysmicheski aktivnom rayone" /The Development and Introduction of a Special Set of Measures on Safety and the Efficient Working of Thick Shock-Prone Coal Seams of the Tkibuli-Shaorskiy Deposit in a Seismically Active Region/, which was compiled by the group of scientists consisting of G. Gelashvili, E. Gordeziani, N. Kvinikidze, K. Kuchukhidze, I. Petukhov and A. Filinkov, is of particular interest.

When studying the mechanism of the manifestation of mine shocks the specialists established that one of the main causes of their occurrence is local shallow-focus earthquakes with an intensity of 3 to 5, which occur in the immediate vicinity of the mine areas at depths up to 5 km as a result of minor tectonic movements of the rock in area and depth. The latter is responsible for the formation in the massif untouched by mine working of so-called rock belts. Under certain conditions these phenomena are manifested as mine shocks with a higher concentration of strains.

On the basis of theoretical and experimental research and modern engineering methods of studying the physical parameters of rocks under the natural conditions of their occurrence, the development of remote control seismic systems of observations and special mine equipment the scientists developed reliable methods of the estimation of the degree of shock-proneness of sections of coal seams. A set of special measures on the prevention of mine shocks, including the advanced working of protective seams, the local and regional injection of water into the coal seams, the use of yielding metal props made from a special section, a new advanced technology of preparing and working the mine and stoping area and so on, has been elaborated.

The extensive introduction of the indicated measures made it possible to decrease considerably the frequency and intensity of occurrence of dynamic phenomena and to eliminate at the mines of the Tkibuli-Shaorskiy deposit emergencies and the production accidents caused by mine shocks. One of the urgent and difficult mine engineering problems was thereby solved.

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CSO: 5000/30

PREVENTION OF SHALLOWING OF LAKE BALKHASH

Moscow TRUD in Russian 26 Apr 81 p 1

[Article by K. Borisov (Alma-Ata): "Water for Lake Balkhash"]

[Text] Scientists of the Institute of Hydrogeology and Hydrophysics of the Kazakh SSR Academy of Sciences have drawn up a plan to protect Lake Balkhash from shallowing.

Unique Lake Balkhash is becoming shallow. In the past decade alone its level has dropped by 1.5 m, the salinity has increased appreciably, the catch of valuable species of fish has declined and the number of water fowl has decreased. And the muskrat colonies have especially suffered. The Bakanasskiy Fur Management, for example, last year procured only 40,000 valuable pelts, two-thirteenths as many as in 1970.

In recent years a large zone of irrigated farming has been established in the southern Balkhash area. The fields and orchards tap nearly all the summer runoff of the rivers which feed the lake, only the high-water Ili River carries its waters to the lake. The fertile valleys, which have quenched the secular thirst, are providing exceptional harvests of rice, fruits and grapes. But the land reclaimers are developing newer and newer lands. And at the same time the area of Balkhash is decreasing rapidly. Scientists warn: desert will begin to encroach on the adjacent lands, the climate will change, while the drying basin of the lake might be transformed into the place of origin of dust storms. Finally, the enterprises of ferrous metallurgy will lose a reliable source of water supply.

Leading scientists of Moscow, Leningrad and Alma-Ata are busy seeking ways to save Balkhash. On an enormous area around Balkhash scientists of the Institute of Hydrogeology and Hydrophysics of the Kazakh SSR Academy of Sciences have discovered enormous artesian basins of fresh water. The largest of them is only 20 km from the lake, at a shallow depth. Its reserves exceed by 10-fold the amount of water in Balkhash itself. The scientists have proposed to use the underground basins for irrigating the fields and orchards, without tapping for this the water from the rivers which feed Balkhash.

As it turned out, the reserves of the underground seas are continuously replenished, and with their rational use it is possible to maintain a constant water balance. The hydrogeologists and hydrophysicists have elaborated the operating conditions of the found receptacles of water. They have answered the question: Where does so

much water under the deserts, which suffer from the heat, come from? It turns out that the reservoirs hidden in the depths of the earth are fed by melting glaciers. Nearly half of the water of the mountain rivers soaks into the ground at the foot of the ranges, and then slowly travels under the ground.

Now more than 40 large industrial centers of Kazakhstan are supplied with artesian water. Alma-Ata receives nearly 80 percent of the water it needs from under the ground. Artesian wells are being used for irrigating pastures. Now the question of the more extensive use of ground waters for the needs of irrigated farming is on the agenda. The increase of the lands irrigated with ground waters by the end of the five-year plan will come to about 100,000 hectares. Tracts located near the rivers flowing into Balkhash will account for a considerable portion of them. And, hence, the condition of the lake will also improve.

7807

CSO: 5000/30

INLAND WATER POLLUTION CONTROL MEASURES

Moscow PRAVDA in Russian 22 Jun 81 p 3

/Article by V. Lozanskiy, director of the All-Union Scientific Research Institute of Water Conservation (Khar'kov): "Our Vital Water"/

/Text/ Unlike such natural resources as petroleum, gas or coal, the reserves of water with time virtually do not change. But its quality changes. The increase of the amount of pollutants in the water of rivers, lakes and reservoirs, which is being observed in many countries, is arousing serious anxiety.

The pollution of rivers and watercourses is connected not only with the influx into them of city and production sewage, as is believed at times. Rain, snow melt and street sprinkling water, which wash from the territory of population centers, industrial sites and farming lands various suspended substances, petroleum and petroleum products, as well as pesticides and chemical fertilizers, also make a significant "contribution." There are also other sources of pollution. A comprehensive, systems approach is needed in controlling them. It is necessary to know not only from where and what amounts of harmful substances enter a river or watercourse, but also how the transformations of these substances occur in them. And not only the technical and economic, but also the administrative and legal means of controlling the quality of natural waters must be mobilized.

The amounts of the maximum permissible discharges of substances, which run off with waste waters, should become the most important administrative regulator of the inflow of various contaminants into natural waters. The method of their calculation has been elaborated by the All-Union Scientific Research Institute of Water Conservation (VNIIVO). But this is only the first step toward the achievement of the ultimate goal. Planning and operational management follow it.

On the orders of the USSR State Committee for Science and Technology the VNIIVO with the participation of the staff members of a number of institutes is completing the drafting of comprehensive goal programs of water conservation of the country, including for the basins of the Dnepr and Severskiy Donets. Their implementation will make it possible in the immediate future to ensure and maintain a favorable water quality in the rivers with the minimum possible expenditures of resources. The centrally controlled water conservation complexes of the river basins will be the technical basis of this. Automatic control systems of water conservation complexes (ASU VK) are being developed for their efficient operation. The Main

Directions of the development of the country, which were adopted by the 26th CPSU Congress, provide for their creation in the basins of the most important rivers of the European part of the USSR.

The automated control systems of water conservation complexes include the equipment and structures, by means of which the continuous objective monitoring of the consumption and composition of the drainage of water, the treatment of sewage and the control of the river discharge will be accomplished. The cycle of work here looks as follows. The information on a change of water quality from automatic monitoring stations or from conventional hydrochemical laboratories is fed into a computer, which processes it and issues control commands for the change of the operating conditions of the water conservation structures. By means of remote control systems these commands are relayed to the regulators, which decrease the discharge of pollutants, increase the degree of their dilution and so on.

The construction of the pioneer experimental production automated control system of water conservation complexes with the central control room in the city of Severodonetsk is being completed on the Severskiy Donets River. The tests of the first start-up complex showed that by means of this system it is possible in practice to ensure the observance in the process of operating water conservation structures of the amount of the permissible harmless discharge of sewage. This was confirmed in 1979, when the best water quality in the past 15 years was achieved by means of the section of the automated control system of water conservation complexes, which had been put into operation, on the most heavily used section of the river below the cities of Slavyansk and Lisichansk.

Now it is no longer doubted that the continuous objective monitoring by means of modern automated measuring instruments of all the main discharges of sewage will help to ensure the planned reduction of the discharge of harmful substances and to step up the efforts of economic managers on converting to waste-free production processes. It will increase the responsibility for the implementation of water conservation measures in the sectors. By promptly warning about all instances of violations of water legislation, it will clearly and conclusively establish the specific parties guilty of polluting the water.

The centrally controlled water conservation complexes of the river basins are a qualitatively new approach to the solution of the problem. And, of course, here one does not get by without difficulties. The main reason for their occurrence is that the procedure of elaborating, adopting and including in the national economic plan comprehensive goal programs of water conservation for the present has not been specified on a state scale. This matter is being carried out, so to speak, on the basis of initiative. The main organization--the drafter of the program--has neither administrative nor financial levers, by means of which it could coordinate the work of the cop performers.

There are many difficulties with the instrumentation. This is a question first of all of the automated water quality control stations, the samplers and the devices for the biological testing of the toxicity of sewage. The demand for them throughout the country comes to tens of thousands. Apparently, their production should be organized at the enterprises of not only the Ministry of Instrument Making, Automation Equipment and Control Systems, which is first of all responsible for this, but also other ministries. Including, of course, the USSR Ministry of Land Reclamation and Water Resources. The necessary scientific stockpile exists for

this. Work on its development could be launched at such institutes as the VNIIVO, the All-Union Scientific Research Institute of Water Supply, Sewage, Hydraulic Structures and Hydrogeology and a number of others, having properly coordinated it.

The ultimate success of the matter of protecting the cleanness of water in many ways, if not decisively, depends on its organization. A true, single master of the river basin as a whole is needed here. Now within it there are tens of thousands of large and small water users, there are inspecting organs, but there is no management organ, which would have the necessary powers and would be responsible for the state of affairs in the river basin. For example, in the Volga basin there are six administrations for the complete utilization and conservation of water, while in the Dnepr basin there are nine, and here they are subordinate to the ministries and departments of three union republics.

The aspiration to improve the coordination of water conservation work has led to the creation on a public basis of committees for problems of the basins of the Dnena, Don, Volga, Ural, Ob' and Severnaya Dvina. They are doing much useful work, but of course, cannot replace the economic organs of the management of the water basins.

In addition to territorial separation there is also another kind of separation. The oblast production administrations of reclamation and water resources for some reason are not in charge of water facilities within the cities. The municipal services deal with them. The same thing is happening at some reservoirs. For example, the Pechenezhskoye reservoir on the Severskiy Donets is under the jurisdiction of the municipal services. Since water in the USSR makes up the unified state water fund, everything speaks in favor of the organization of a service to manage water basins as a unified whole. Subsequently it could become the base for the creation of a Unified Water Management System of the country.

The water management of the country in its essence is an independent sector, which provides users with water of the necessary quality in the necessary amount and is responsible for the most favorable condition of water facilities. In order for it to cope fully with its tasks, an adjusted mechanism of its cost accounting relations with other sectors of the national economy, in my opinion, is required. The introduction of paid water use seems necessary. The practical experience of past years has shown that the "planned" fines for the discharge of untreated or inadequately treated sewage cannot play the role of a regulating mechanism. They should be an exceptional phenomenon, they should be attributed to the nonproductive expenditures of enterprises and not taken into account in the planned production cost. A fee should be exacted both for the diversion of water and for the discharge into water facilities of sewage which has been purified to set norms, while the expenditures on such purification should be assigned to the cost of the product (services).

The implementation in our country of a set of measures on the control of the quality of natural waters will make it possible to utilize more completely the advantages of our socialist method of managing the economy and to improve the state of man's environment.

'PRAVDA' EDITORIAL STRESSES IMPORTANCE OF NATURE CONSERVATION

Moscow PRAVDA in Russian 3 Jun 81 p 1

/Editorial: "Concern About Nature"/

/Text/ In our country the work on nature conservation has acquired an extensive scale. Many industrial enterprises are actively participating in it. Thus, at the Novopolotsk Petroleum Refinery in Belorussia a closed processing method has been introduced, treatment facilities are operating efficiently and means which make it possible to trap contaminants and to set up their recovery are being used. Much is being done to protect nature at the Verkhnedneprovsk Mining and Metallurgical Combine in Dneprovskaya Oblast, the Chelyabinsk Electrolytic Zinc Plant imeni S. M. Kirov and a number of other large enterprises.

If we speak as a whole about what was done in the area of nature conservation during the past 5-year period, a scale picture will appear. Some 67 km³ of water were reused, which is equivalent to the "saving" of an entire river. Measures on protecting the air basin were implemented. The recultivation of 100,000 hectares of land disturbed by mining was carried out annually. The area of restored forests increased on the average by 2 million hectares a year.

In the Accountability Report of the CPSU Central Committee to the 26th party congress Comrade L. I. Brezhnev named the inevitable increase of the expenditures on environmental protection among the features of economic development during the 1980's. The consumption of natural resources is the first principle of the activity of man on earth. But the more extensive the scale of the economy is, the more economically natural resources must be consumed.

Specific tasks on improving nature conservation are set in the Main Directions of USSR Economic and Social Development for 1981-1985 and the Period to 1990. The attention toward the preservation of farming lands has to be stepped up, the rate of recultivation of land has to be increased. It is necessary to develop mineral deposits comprehensively and to show greater concern about the cleanness and fullness of rivers and lakes. Technological processes and means of transportation should be improved in order to reduce the discharges of harmful substances into the air. Measures aimed at increasing the number of wild animals and breeding valuable types of fish will be implemented, the guarding of forests against fires and their protection against pests and diseases will be increased. The entire set of these operations concerns not only economic managers, but also local soviets and the public at large.

Measures on environmental protection, of course, require reliable technical support. In particular, the goal of increasing the output of highly efficient equipment for gas purification, dust trapping and the disposal of industrial sewage has been set for chemical and petroleum machine building during the 11th Five-Year Plan; the instrument makers should increase the output of instruments and measuring devices for monitoring the condition of the environment. The complete processing of raw materials and the extensive use of resource-saving equipment and low-waste, waste-free and energy-saving processing methods are becoming a common concern.

In order to cope with these tasks more successfully, it is necessary first of all to eliminate the existing shortcomings. The departmental approach to the matter still has an effect here. Thus, from year to year the assets allocated for conservation measures for the USSR Ministry of Power and Electrification are not being assimilated. The problem of trapping sulfur compounds from the exhaust of thermal electric power stations is being solved slowly, but then this would make it possible not only to make the air basin cleaner, but also to obtain sulfuric acid, which the national economy needs. Enterprises of ferrous metallurgy are polluting the air, they are also slowly carrying out the recultivation of mine workings and industrial dumps. The underestimation, and especially the neglect of conservation operations must not be allowed. It is the duty of ministries and departments to act here as organizers and to monitor the progress of the work.

By the end of the five-year plan it is planned to deliver for agriculture not less than 115 million tons of mineral fertilizers and 650,000-680,000 tons of agents to protect plants a year. They must be used competently and efficiently so as not to harm the environment. It is necessary to use biological means of protecting plants more extensively in the drive against losses of the harvest due to pests and weeds. The managers of enterprises of the agro-industrial complex are called upon to see to the efficient use of water and the improvement of the state of irrigated and drained lands.

Nature conservation measures require thorough scientific substantiation. Here it is up to the scientists, they have to answer a number of important questions raised by practice. For example, the formation of a network of reserve areas and national parks has to be continued. It is the duty of scientists to conduct research on a high level so that it would effectively help the development of land.

A number of state acts, which regulate the use of nature, have been passed in our country. Among them are the fundamentals of all-union forest and water legislation, laws on natural resources, air protection and the protection and use of the animal world. Much work on creating and developing a system of cadastres of natural resources, which should be performed more actively, lies ahead. During the current five-year plan state administration will be improved and monitoring in the area of the use of nature and environmental protection will be stepped up.

Nature and its resources are our common property. The concern that its beauty and generosity also be preserved for future generations should be national. The republic societies for the protection of nature have to their credit many gains both in ecological propaganda and in the mobilization of broad groups of the population for the protection of the resources of their native land. It is necessary to involve the public more extensively in this important matter.

The republic, kray and oblast party organizations and the party committees of departments and enterprises are obliged to devote unremitting attention to questions of nature conservation and the efficient use of its resources and to ensure regular monitoring of the proper use of natural resources and the effectiveness of conservation propaganda. The more active the creative search of the millions is, the more initiative there is in this matter and the more friends nature has, the more extensive our forests will be and the cleaner the water of rivers and lakes will be. Concern about nature conservation is a matter of every Soviet individual.

7807

CSO: 5000/29

USE OF STARCH PLANT WASTE WATER FOR IRRIGATION ENCOURAGED

Minsk SOVETSKAYA BELORUSSIYA in Russian 12 Jun 81 p 2

[Article by V. Perepelitsa and M. Gerasimovich, candidates of agricultural sciences: "Without Polluting the Rivers"]

[Text] One of the ways to reduce pollution of the water basin is correct recovery of industrial waste water. The enterprises of the food industry of Belorussia alone discharge about 55 million cubic meters of effluent into the reservoirs every year. This results in pollution of the reservoirs, their overgrowth with vegetation, depletion of oxygen, and consequently, decrease in the fish reserves. At the same time, waste water of many enterprises contains substances that are necessary for the nourishment of agricultural crops.

There are several methods for purifying effluent, chemical, mechanical and biological. The most applicable is biological with the use of agricultural irrigation fields. Waste water of the starch, alcohol and vegetable canning plants can be used to irrigate agricultural crops immediately without preliminary preparation. They are rich in nitrogen, phosphorus, potassium, magnesium and other nutrients. Thus 1,000 cubic meters of general effluent obtained in processing potatoes into starch are equivalent to 3.7 centners of ammonium nitrate, 3.4 centners of superphosphate and 3.1 centners of potassium chloride. Nevertheless, at almost all the starch plants of the republic, the effluent is a source of environmental pollution and does not help the harvest. About 6 million cubic meters of effluent are accumulated in a season of operation of all the republic plants. If it is diluted with water, considerable areas of agricultural crops can be irrigated.

In 1974 our country constructed irrigations fields for the first time in the Sudorov kolkhoz of the Borisovskiy rayon and began to use the waste water of the Veselovskiy potato-starch plant to irrigate hay fields and pastures. About 200,000 cubic meters of waste water are accumulated in the three accumulating ponds during the winter operation of the plant. The waste water is diluted with water from the Berezina River. The DDN-70 sprinkler device waters the perennial grasses. The Belorussian Scientific Research Institute of Farming is studying the effectiveness of watering the agricultural crops with waste water.

As the studies showed, the greatest output can be obtained from the waste water when perennial legumes and grains are irrigated. Whereas irrigation with waste water on grain crops is effective in years with an insufficient supply of precipitation, it guarantees a high addition of the green mass to the harvest of grasses even in the rainy years. Watering and fertilizers also improved the quality of the feed. The content of protein, potassium and amino acids was increased in it.

The use of waste water in combination with mineral fertilizers yields another very important advantage. It increases the duration of cultivating perennial grasses on one field to 6-7 years. At the same time, the plots without watering and fertilizers need to be sown to grass already in 2 years after the use of perennial grasses. Watering with fertilizers consequently significantly saves monetary resources and sowing material. In addition, it promotes stability of the perennial grass harvests over the years and obliterates the unfavorable weather conditions.

The plan provides for irrigation of 170 hectares of agricultural crops in the Suvorov kolkhoz. Nevertheless only 60 hectares of perennial grasses were watered here. In order to irrigate the planned area, it is necessary to have three DDN-70 units and the same number of T-74 tractors. They now only have 1 unit and tractor.

Complete recovery of the effluent of the Veselovskiy starch plant hit another snag. The plant not only processes potatoes into starch, but also corn. Other plants also process it. The technology stipulates the use of sodium hydroxide to extract the starch from the corn. However it is known that sodium hydroxide can have a fatal effect on plants. The plant consequently discharges this effluent to a separate accumulating pond and it is not used for irrigation. A method should therefore be worked out for recovery of waste water that is produced in reprocessing corn into starch.

Since the ministries of agriculture, the food industry and land recovery are interested in solving the problem of the efficient use of the food industry's waste water, the percentage participation of each of them should be defined. The State Committee of the Belorussian Council of Ministers for Environmental Protection should take a definite part in solving the problem. The work should be accelerated in all possible ways. After the recovery of waste water of the starch plants it will be the turn of the dairy, canning, vegetable-drying and other enterprises which process agricultural products.

Complete recovery of waste water of the starch plants of the republic will permit irrigation of no less than 10,000 hectares of hay fields and pastures and will result in no less than 250 rubles of profit from each of them per year. If one takes into consideration that in the 11th Five-Year Plan the republic will greatly expand construction of irrigation systems, it is important that the planning bodies provide for their construction in the first place in those farms that are located near the starch plants in order to reduce pollution of the environment with waste water. This will significantly curtail the consumption of drinking water and will reduce the danger of polluting the water basin with effluent.

9035

CSO: 5000/32

ROLE OF WEATHER FORECASTING, ENVIRONMENTAL PROTECTION EXPLAINED

Moscow TRUD in Russian 5 Jun 81 p 2

[Interview with Yu. A. Izrael', chairman of the USSR State Committee for Hydro-meteorology and Environmental Control and readers of TRUD on the occasion of 5 June World Environmental Protection Day: "Weather for Tomorrow"]

[Text] [Question] The weather reports are firmly entrenched in our lives. Today, for example, no farm will begin to sow without a prediction of the temperature and humidity. But meteorologists not only help those who work in the kolkhozes and sovkhozes. Tell us how the meteorological service participates in economic construction. A. Altunin, brigade foreman of stone masons, Krasnodar.

[Answer] The activity of the power engineering, communications and construction enterprises is tied to meteorological conditions. The success of forestry and agriculture, railroad and automobile transportation, and marine sectors depends on them a lot. After receiving a warning about a drastic change in the temperature, a squall, or fog, high-altitude work is stopped, measures are taken to preserve material valuables, and protection from flooding, avalanches and mud flows is the concern. Aviation cannot operate without a weather forecast.

The dispatcher of the power system, compiling a schedule for the distribution of heat and electricity must mandatorily have a forecast of the air temperature so that surplus power is not generated, or on the contrary, underheating. By using forecasts, the power engineering enterprises in the country annually save about 1.5 million tons of comparison fuel.

Forecasts of meteorological conditions have recently been used to take measures to protect the atmospheric air from pollution. Hydrological forecasts are widely used in the practice of water management planning.

[Question] Why do the meteorologists make mistakes? How are the forecasts compiled? B. Veselovskiy, textile kombinat mechanic, Odessa.

[Answer] The weather forecast is a lot of work by a very large number of people. They make observations at the meteorological and aerological stations, on weather ships, airplanes, with the help of radars and meteorological satellites. The observation network currently includes over 3,000 hydrometeorological stations, thousands of posts and hundreds of meteorological radars. They measure pressure, cloud cover, wind, temperature and air humidity at the earth and at altitudes up to 30-35 kilometers. The data are then processed with the help of computers. They are entered into tables and numerous weather charts. And finally, a forecast is compiled. For

this purpose we use pressure field and circulation charts calculated by computer for different atmospheric levels for a period up to 3 days.

We do not have any grounds to reproach the meteorologists for carelessness. Errors sometimes occur. But first of all because (short-term weather forecasts are right 85-88% of the time) the atmospheric processes are extremely complicated. It is especially difficult to make a forecast in the zones that are on the boundaries of warm and cold: for example, a cyclone shifts only several degrees and the populated area is in its warm zone and instead of the predicted frosts, a thaw occurs. It is very difficult to predict local phenomena. Showers or thunderstorms in summer have a "spotty" nature. In Moscow, in the region of the VDNKh [Exhibition of Achievements of the USSR National Economy] it can be pouring rain while the sun is shining in the center of town. It is very complicated to predict local weather with accuracy to several kilometers. Where this is necessary (for example, at the airports) a lot of additional equipment is installed.

Weather forecasting belongs to the section of the most complicated tasks of science, and the longer the period it is compiled for, the more complicated the task. It is no accident that month-long forecasts are only correct in 60-65 cases out of 100. The decisions of the 26th CPSU Congress make special note of the need to perfect methods of weather forecasting. Our meteorologists are currently working on this.

[Question] It is known that in a number of oblasts of our country units are operating which protect the harvests from hail. How is this done? A. Kushnir, associate professor of medical institute, Kishinev.

[Answer] Today valuable agricultural crops are protected from hail in all the southern republics of the country on an area of about 7 million hectares. The economic effect of this service which saves the harvest of grapes and fruits is from 70 to 100 million rubles per year. How is hail protection implemented? Artillery weapons taken from operation or especially developed small rockets are used for this purpose. Since hail clouds have to be shot in densely populated areas, housings have been made for the projectiles which on explosion break up and practically no fragments are left. The projectiles or rockets carry a special reagent, silver iodide into the clouds and the foci of hail generation. The silver iodide creates artificial crystallization nuclei which results in rapid falling of rain or hail and the hailstones can no longer grow to large dimensions.

Essentially the same technology is used to artificially induce rain. Clouds are seeded from airplanes or with rockets with crystals of artificial ice or silver iodide. Water drops condense on them and they fall in the form of rain. Experiments are now being conducted to disperse fog at airports and to artificially produce additional precipitation in the plain regions of the Ukraine, Georgia, Armenia and certain other regions. The technique of extinguishing forest fires with artificially induced precipitation which was developed by the Main Geophysical Observatory of our committee has already been in use for several years.

[Question] What is being done to reduce pollution of the environment? What will be the direction of this work? A. Babenkov, mechanic of the plant "Kuzbassradio," Belovo.

[Answer] A special national service of observation and monitoring of the environmental pollution level has been functioning in our country for several years already. It was organized by the State Committee for Hydrometeorology and Environmental Control jointly with the interested ministries and departments. We are now intensively working on standardization and limitation of emissions of harmful substances. We are formulating standards for maximum permissible emissions (MPE) for each enterprise separately. The agencies of the State Committee for Hydrometeorology and Environmental Control are responsible for monitoring the observance of these standards.

Monitoring is necessary of course. But I would like to recall that we will only be able to completely eliminate environmental pollution when each enterprise operates on a waste-free or low-waste plan for production processes. Their basic scientific and technical principles have been worked out for the majority of national economic sectors.

[Question] We, the residents of Baku, are happy to note that the Caspian Sea is becoming cleaner from year to year. The water is more transparent and there are fewer oil spots. How was this done? O. Agayev, brigade foreman of impregnators of the 50th Anniversary of the Azerbaijan Komsomol Electrical Machine Construction Plant, Baku.

[Answer] Twice in recent years, the USSR Council of Ministers has made decisions to take special measures to protect the Caspian from pollution. New treatment facilities, sewage systems in cities located in the basins of the Volga and Ural were built, and 44 water protection facilities were set up in Azerbaijan alone. By 1985, discharge of untreated domestic and industrial effluent into the Caspian Sea will be completely stopped. Technological equipment is being developed and put into operation to prevent water pollution during the operation of offshore oil and gas fields. Construction has been completed of a dam in the Gulf of Kara-Bogaz-Gol which should slow down the dropping level of the Caspian Sea. Since 1975 its northwest water area has been declared a preserve.

[Question] Nuclear power engineering develops more each year. What is the influence of nuclear power plants on the environment? L. Gureyeva, foreman of the plant of electric-vacuum instruments, Voronezh.

[Answer] Nuclear power engineering is really developing very rapidly in our country. Whereas in the beginning of the 1970's the specific weight of electricity generated by the AES did not exceed 1-3%, after the end of the 10th Five-Year Plan it was 8%, and in the future will be 20%. An important advantage of nuclear power plants is that their emissions do not contain any chemically active reagents. Nuclear power engineering also does not represent a danger from the viewpoint of radioactive emissions or contamination with radioactive products. Calculations show that its adverse effect on the environment is a thousand times lower than the effect of conventional thermal power stations.

Modern AES have reached a high degree of equipment containment and purification of emissions of radioactive contamination. Detailed examination of the entire cycle, from ore extraction to power production, proves that the dose of local radiation at all stages does not exceed several percents of the dose from natural sources.

I would like to recall that the modern safety systems at nuclear power stations in our country are so advanced that in all the time they have been in operation, there has not been a single accident accompanied by radiation damage to the environment or the population's health.

[Question] All of us live on one planet and our environment has no borders. Therefore it is difficult to engage in environmental protection in the framework of one state. I would like to know how international cooperation in this area is developing? A. Misheladze, electric welder of the plant of gas apparatus, Tbilisi.

[Answer] We view environmental protection as one of the major social and economic problems whose solution is of interest to people on the whole planet.

In 1977, on the initiative of the USSR, a convention was developed and signed to ban military or any other sometimes hostile use of means of affecting nature. In 1979, again on the initiative of the Soviet Union, a European high level conference took place in Geneva on the problems of environmental protection. A convention was signed for transboundary air pollution at great distances, and a declaration on low-waste and waste-free technology. A new and important initiative of the USSR is the resolution adopted by the 35th session of the U.N. General Assembly "On the Historical Responsibility of States for Preservation of Nature for the Present and Future Generations."

The Soviet Union participates in the activity of a number of international organizations and programs which are working in the field of environmental protection. We have extensive and fruitful ties in environmental protection both with the socialist and capitalist countries. The 26th CPSU Congress set the task: "Intensify protection of nature, the earth and its depths, atmospheric air, reservoirs, and the animal and plant world." By common efforts we must preserve the beauty and cleanliness of the earth, sky and world ocean for the present and future generations.

9035

CSO: 5000/32

ROLE OF SMOKESTACKS IN ENVIRONMENTAL PROTECTION

Alma-Ata NARODNOYE KHOZYAYSTVO KAZAKHSTANA in Russian No 2, 1981 pp 75-76

[Article by V. Aspandiyarov, candidate of technical sciences and associate professor, and Zh. Khaydarov, engineer]

[Text] The choice of the height of smokestacks for industrial objects is determined by the total discharge of noxious substances and ash. At the present time, large thermal electric power stations have, as a rule, several supertall stacks, as a result of which the smoke is completely "dissolved" in the air and there is a reduction in the concentration of noxious substance over populated regions. In a word, the taller the stack, the less gas and dust there are in city air.

However, smokestacks have now reached their limit as far as height is concerned. The cost of constructing them is also high, and sometimes reaches the cost of the construction of the entire thermal electric power station.

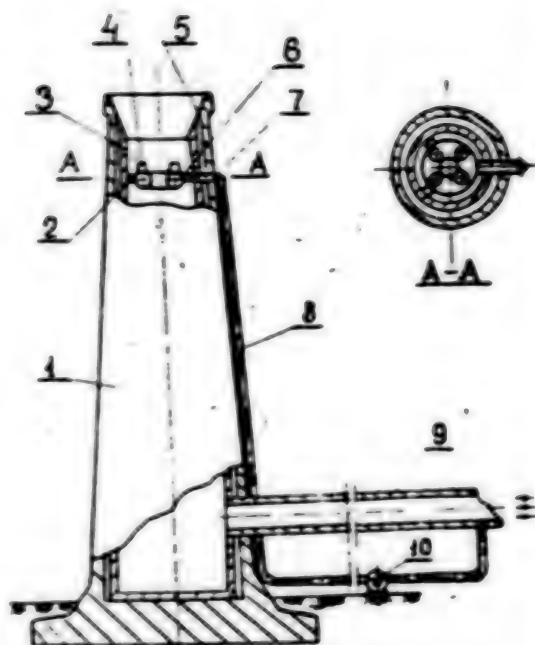
Another factor to consider is what if an electric power station is built near an airport? In this case a high smokestack can be the cause of a disaster. This has been known to happen.

Guaranteeing flight safety is, of course, a matter of primary importance. Aeroflot's legal requirements for height limitations of industrial structures must be observed completely. On the other hand, however, we also cannot allow a high concentration in the air of substances that are dangerous to health, which is what happens when short smokestacks are used.

So, an alternative appeared. The short smokestack did not satisfy the requirements of Gossaninspektsiya [State Sanitary Inspection], while the construction of a tall one was prohibited by the requirements for aircraft flight safety. The teachers and students at the Alma-Ata Power Engineering Institute took it upon themselves to solve this problem, and their joint creative efforts met with success. An original smokestack design that has been awarded a patent by the USSR State Committee for Inventions and Discoveries was proposed.

What was it that the students and teachers suggested? How did they succeed in increasing the height at which smoke is discharged without changing the size of the stack?

As has been discovered, discharging smoke at a low height is related to "clogging" of the mouth of the stack. This occurs because the flues "diligently" inject into



the stack smoky gasses that it is not capable of letting through. Static pressure builds in the stack and the gasses begin to filter through the lining, which leads to its rapid destruction. Cases are known where a smokestack designed for a service life of 30-40 years have become useless in 3-4 years.

The students and teachers at the power engineering institute suggested that a device creating additional discharging power be installed in the upper part of a stack. It is in the form of a jet pump, the housing of which is the stack's mouth with its diffuser, while the outlet is an annular distributing manifold with removable nozzles that is installed inside the stack in direct proximity to the mouth. The manifold can also be installed outside the smokestack, while the removable nozzles

with the conducting sections of the conduits are installed inside it.

The device, the purpose of which is to act as a gas discharge accelerator, does not create additional loads in the smokestack's mouth and can be used in stacks of any capacity and productivity rating. This makes it possible to reduce the static pressure in a stack and concentrate the noxious impurities, as well as increasing the height at which the gasses are discharged and improving their flow conditions.

The figure on this page shows a cutaway view of the proposed smokestack design. It consists of the barrel (1), made in the form of a confusor at the end of which there is a diffuser (5). The gas flue (9) is connected to the upper part of the barrel by means of a gas conduit (8) in which there is a forced-draft fan (10). In the upper part of the stack, the annular distributing manifold (6) with its removable nozzles (4) are attached by means of bars (2) and the delivery section of the gas conduit (7). The bars and the delivery section of the gas conduit are installed in the diffuser or the lining (3).

The device operates as follows. From the gas flue, part of the gasses are sent into the gas conduit with the help of the forced-draft fan and are then injected into the annular distributing manifold through the gas conduit's delivery section. The basic gas flow from the gas flue is directed into the smokestack's barrel. The outlet, which consists of the annular distributing manifold and the removable nozzles, discharges the gasses into the atmosphere under pressure. Thus, there is a barrelless increase in the gas discharge height of 50-100 meters or more. This gives a great economic saving.

As is known, a tall smokestack is an expensive engineering construction. Practice has shown that the construction of a stack 320 meters tall costs the state several million rubles. The basic rule is that the taller the barrel, the higher the cost.

According to the most modest calculations, the new smokestack design will make it possible to save about 1 million rubles for each such object. The expenses for the

introduction of this innovation are not great and do not even have to be taken into consideration, for all practical purposes.

The invention of the teachers and students at the Alma-Ata Power Engineering Institute should attract the attention of planning organizations since it is of great national economic importance and can be of practical use in the construction of many industrial objects. The construction of smokestacks with the new design is of particular importance for cleaning the air basin of this republic's capital. By all calculations, they can discharge smoke above the inversion layer of the atmosphere, which prevents clouds of gasses from coming in contact with the layers of air near the ground.

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APSHERON TRASH PROCESSING PLANT

Baku VYSHKA in Russian 31 May 81 p 2

[Article by S. Gopanyuk: "The Work Does Not Join Ends"]

[Excerpt] A not entirely ordinary plant is being built on Apsheron, not far from the settlement of Balakhany. It will be able to process annually 400,000 tons of household waste, nearly half of what is hauled from the city to the dump. Metal objects will be removed from it by electromagnets. The remainder of the waste will move along production lines, will be pulverized, sifted and will undergo biological changes in special thermal drums. In all 60,000 tons of fertilizers and 2,000 tons of metal a year--such is the volume of the future output of the plant.

Such enterprises are already in operation in Moscow, Leningrad and Alma-Ata. In addition to the salvaging of waste products, they rid the environs of cities of dumps, and they provide a net income. The Baku plant, according to the plan of specialists of the Moscow State Republic Institute for the Planning of Municipal Construction, will annually yield a profit of 600,000 rubles and in 5 years will recover the expenditures connected with its construction.

7807

CSO: 5000/30

BRIEFS

SOCHI EARTHQUAKE—Sochi, 17 April (TASS)—This morning the Sochi Seismic Station recorded an underground tremor. Its epicenter was in the sea, not far from the shore line between Sochi and Tuapse. In the health resort camp of Makopse the tremor was felt with a force of 5. In Lazarevskiy Rayon it was felt with a force of 4 and in the central region of the health resort city it was felt with a force of 3. There were no damage or injuries. /Text/ /Moscow KOMSOMOL'SKAYA PRAVDA in Russian 18 Apr 81 p 4/ 7807

IRKUTSK EARTHQUAKE—Irkutsk, 22 May (TASS)—Today at 1351 Moscow time an underground tremor with a force of up to 5 was felt in Irkutsk and its environs. As specialists of the Irkutsk Seismic Center reported, the epicenter was located in the region of Southern Baykal 90 km to the east of Irkutsk. The earthquake, which was also felt in a number of other cities of Irkutskaya Oblast and the Buryatskaya ASSR, caused no injuries or damage. /Text/ /Moscow PRAVDA in Russian 23 May 81 p 6/ 7807

SAKHALIN, KURIL ISLANDS QUAKES—Yuzhno-Sakhalinsk, 21 June (TASS)—This morning inhabitants of the mining settlement of Mgachi in the northern part of Sakhalin Island were awakened by a loud rumble. An underground tremor followed. The ground movement came to 4-5 on the Richter scale. The earthquake damaged some buildings. The same day an underground phenomenon also appeared in the South Kuril Islands. The epicenter of the earthquake was located in the Pacific Ocean to the east of Shikotan Island. In the settlement of Malokuril'skiy it was felt with a force of 4. Neither earthquake caused injuries. /Text/ /Moscow PRAVDA in Russian 22 Jun 81 p 8/ 7807

EARTHQUAKE-PROOF DAM—Dushanbe, 23 May (TASS)—How do you build a dam 335 m high in an area of strong earthquakes? Scientists of the Institute of Seismological Construction and Seismology of the Academy of Sciences of Tajikistan have provided an answer to this question. They have substantiated the prediction of seismic activity on the construction zone of the Rogunskaya GES, the largest in Central Asia, on the Vakhsh River. The construction of the 3.6 million kW hydroelectric power station is called for by the decisions of the 26th CPSU Congress. The prediction of the seismologists is based on the study of the statistics of underground shocks in the region and on the evaluation of the information which is received from a vast network of seismic stations. The calculation of the potential strength of underground tremors is the basis for the design of the tall dam, as well as of the building of the GES, which for the first time in the practice of domestic hydraulic construction will be sunk 60 m into the hearth of the rock foundation. The great amount of experience gained by scientists during the construction of the Nurekskaya

GES on the same Vakhsh River provides assurance of the guarantee of the seismic stability of the structures of Rogun. /Text/ /Moscow PRAVDA in Russian 24 May 81 p 3/ 7807

LEAD, ZINC COMBINE FACILITIES--Ust'-Kamenogorsk--Much attention in Ust'-Kamenogorsk is being devoted to the construction of environmental protection facilities. During the years of the past five-year plan the collective of the Altaysvinetsstroy Trust put into operation 18 large facilities with a value of 58.5 million rubles. Among them are complexes for the treatment of sewage, the trapping of dust and the recirculation of water at the lead and zinc combine. /By B. Pavlov/ /Text/ /Moscow STROITEL'NAYA GAZETA in Russian 3 Apr 81 p 2/ 7807

OIL SPILL BARRIER--Ufa--The series production of the Anakonda floating barrier, which is designed to prevent the spilling of petroleum products during the loading and unloading of oil tankers and refueling, has been started for the first time in our country at the Ufa Order of the October Revolution Plant of Industrial Rubber Items imeni M. V. Frunze. The barrier consists of 15 interchangeable sections 5.6 m long. Foam plastic floats 30 cm in diameter are contained in the rubberized fabric cover of the sections. A chain, which ensures the stability of the structure in the water, is hung below, in a pocket made from rubberized material. The length of one set is 84 m, but the barrier can also have a considerably greater length, since the sectors are easily interconnected. By means of anchored buoys and guy ropes the Anakonda surrounds the ship being loaded or unloaded and does not allow petroleum products, a portion of which are inevitably lost during handling, to spread over the surface of the water. After the completion of the loading or unloading a special petroleum collector approaches the ship and pumps out the spilled petroleum products, which after refining are used again. The tests conducted at the Odessa Oil Tanker Port have shown excellent results. With a sea of 2 and a wind speed of 6 m/sec the barrier contained a layer of petroleum up to 15 cm thick. This year all the oil tanker sections of the ports of the country will be equipped with the Anakonda floating barrier. /By M. Sadretdinov/ /Text/ /Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 2 Jun 81 p 2/ 7807

EARTHQUAKE PROTECTION--The new residential buildings in the cities of our republic are acquiring yet another version of "self-protection" from earthquakes. The next defense position against the elements was suggested by the specialists of the Dushanbe planning institute "Tadzhikgiprostroy." Here they are developing a plan for an experimental nine-story large-panel building with disconnectable links, special assemblies for connecting structural parts that during an underground attack will attenuate the interrelationship and at the same time, will disperse the force of the jolts. The designs of this building will reduce the seismic loads two-fold. There is another no less important advantage here: the consumption of scarce steel in this structure will be reduced by 5-7 kilograms per square meter of total area. If one takes into consideration that the nine-story building recommended itself well in Dushanbe, then the advantage of this version is obvious. Seismically resistant construction continues to be perfected in the republic. Through the efforts of the seismological scientists and planners, the residential buildings, industrial and other national economic facilities are becoming highly seismically reliable. [By correspondent of TadzhikTA] [Text] [Dushanbe KOMMUNIST TADZHIKISTANA in Russian 7 Jul 81 p 1] 9035

ENVIRONMENT MINISTER HANSEN DISCUSSES ISSUES

Oslo ARBEIDERBLADET in Norwegian 3 Jul 81 p 6

[Article by Pal Nordenborg: "The Silent Environment Protection Revolution"]

[Text] The wood mouse is protected game, according to the law; if only it does no damage. This applies to the wolf as well, now the only one of our wild animals in danger of dying out, though a roving wolf or two from Finnish or Russian forests keep alive a slight hope that it will be possible to save the wolf as well.

Rolf Hansen enjoys himself when he has the opportunity to say something about what the environment protection ministry has been doing since it was established by the Bratteli government in 1972. Despite Alta [a hydroelectric power project in Northern Norway] and the fight over the watercourses, this is an area where the government has let favorable winds blow freely. "Big game and the predators are an example of what successful modern game management can be. Many big game and predator stocks were endangered 10 years ago. By means of bans on hunting and through protection they have now been built up again. And there is no reason to doubt that this can be done in other areas as well," he says to ARBEIDERBLADET.

Silent Revolution

"A revolution has taken place in the matter of environment protection during the 1970s," says the environment minister. He believes that many still see environmental protection matters as causes that must be fought through by means of strong action. But it is easy to overlook the fact that a silent revolution has taken place, he thinks.

"I do not underestimate the role protests to protect the environment can play. But the breakthrough for a new awareness of environment values will be found in finding solutions to concrete tasks. The chief message is that environmental protection is a task for all society. This requires cooperation," says Hansen.

Everybody knows, thinks Hansen, that regard for the economy plays a role, even though there are some absolutes which cannot be abandoned. Among these are preservation of representative species of animals and breeding areas for them. Today, the moose is found all over the country, and the red deer as far north as Malselv. Bear and wolverine are also increasing in numbers.

The political guidelines, the basic legislation, and administrative arrangements were established last spring in the Storting for an extensive environmental protection effort for the entire coming decade. The largest court cases have been concluded. What remains is a revision of the environmental protection law, aimed at some small changes. Also remaining is follow-up work to be done in connection with the new planning law.

If there should be a nonsocialist election victory in the fall, this is, by the way, a law which the Conservatives, supported by the Center Party and the Christian People's Party, have already decided to withdraw.

Rolf Hansen questions how this is to be done, however. In this matter, he says, the nonsocialist parties are not in touch with their own grass roots. And he is quite certain that they will come into conflict with the thorough and lengthy work on which this law is based.

Land Owner Interests, Primarily

When the Conservative central board approves of withdrawal by an eventual Willoch government in the fall of the planning law in order to start a new useless analysis, the Conservatives will once more advocate torpedoing an important democratic reform which gives the people influence upon plans by which they are affected, says Rolf Hansen.

He suspects that the Center Party and the Christian People's Party have not gone along with the Conservatives in this matter without considerable doubt.

The government promoted the planning law, now passed by the Storting with Labor Party and the Socialist Left party [SV] votes, because it simplifies resources and area uses. Earlier legislation is coordinated; it provides local control, adjustment of living conditions, justifiable administration of natural resources, and, not least, presupposes contributions by the public.

All nonsocialist parties in the Storting voted against the law in its entirety. The Conservatives, the Christian People's Party, and the Center Party based their opposition among other things on the interests of the landowners not being adequately protected. The Liberals opposed the law because their proposed changes in certain paragraphs of the law were voted down.

Rolf Hansen also refers to the fact that the law has gained the general approval of experts and municipal, county, and state authorities. In his opinion it is rather striking that the three nonsocialist parties during the Storting debate proposed that the law proposal be sent back to the government. In reality, the planning law was based upon the mandate issued for the analysis by the Korvald government in 1973.

More Costly Without Planning

What people have much trouble with today are building codes. The resentment of planning that often arises is often connected with adherence to building codes and accomplishment of construction tasks. In his opinion, this section of the legislation

must be constantly reviewed. The purpose of the planning law is that of creating balance among the various area use demands, such as for housing, social institutions, industry, recreation, and environmental considerations.

The most costly of all for a municipality is not planning for area use. This brings upon the municipalities constant conflicts, says Hansen, who thinks that after the building law of 1965 too great expectations were anticipated from the general plans. They easily ended up in a drawer. But the fact is that municipalities do not have sufficient areas to get along without the municipal plan.

"I am convinced that the municipalities and the individual will get along much better when municipal councils are enabled to introduce planning, as the new law presupposes," says Rolf Hansen.

Hunting for the Public.

He sees the environmental policy landscape as follows:

"Without the will to take conscious attitudes toward nature and environmental protection things go wrong. I have difficulty in discovering whether the nonsocialist parties have any common environmental policy at all. In recent years the interests of landowners have been their theme, including that of the Liberals. I cannot imagine an environmental policy which, at the cost of public interests, speaks only for the interests of the landowners.

"My experience tells me the reverse: that a well considered environmental and resources policy does not conflict with the real interests of the landowners; on the contrary, it benefits them."

Rolf Hansen also recalls that the question of increasing public access to hunting small game engendered strife in the Storting. That time as well, the Labor Party and the Socialist Left saw to a better arrangement. The new game law is in principle based on voluntary arrangements. If the landowners oppose this, however, the game board has the authority to determine that hunting licenses are to be issued.

Now it is the Salmon

It is not unlikely that vacationers, who will soon be on their way, will give a thought to the environment minister, who, by the way, will soon depart for the West country for fjord fishing. If anyone should meet him on the way, he could produce the information that 51 national parks have been established in mainland Norway. Only one national park, that of Saltfjellet, remains to be established. Further, 28 landscape protection areas, 303 nature reserves, and 225 natural monuments have been established. They were established for the purpose of protecting rare animal life or special scenery. The protected area is relatively modest in extent, encompassing no more than 7,500 square kilometers, or a little over 2 percent of the land area of Norway.

Though preservation is in most cases undertaken by the municipalities the state has in some cases found it necessary to preserve such areas, such as for example the so-called Skerries Park, an area of about 9000 decares between Tvedestrand and Lillesand.

To salmon fishermen he will say that if efforts to reduce catches are unsuccessful the result will be that not a single Norwegian spawning salmon will enter any of our 250 salmon rivers. Lack of rain and long periods of drought, he will say, are things the environment ministry cannot control. It is another matter, however, how the reduced inroads upon the stock is to be distributed among the various interests, such as drift net fishermen, landowners, sport fishermen and others.

This is a political question where it is a matter of distributing the results of protection measures in the most reasonable way among the various groups.

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CSO: 5000/2149

GOITER AT EPIDEMIC LEVELS IN KASTAMONU PROVINCE

Istanbul MILLI GAZETE in Turkish 14 Jun 81 p 10

[Text] Ankara (ANKARA AGENCY) -- In and around Kastamonu's Azdavay District, 90 percent of the population is found to be suffering with goiter.

Residents of the villages around Azdavay face the threat of goiter from birth owing to inadequate iodine in the drinking water and certain nutritional factors. The villagers learned as the result of health surveys that the large swellings on their throats are "goiter" and asked that measures be taken to combat this steadily-spreading disease.

After identification of the goiter problem in the area by Dr Mehmet Ali Aksoy of the Azdavay clinic and government Dr Enver Unver, surveys of the villages began. The surveys revealed that villagers from age 7 to 70 are suffering with goiter.

"Public Apathetic Toward Disease"

Dr Mehmet Ali Aksoy and Dr Enver Unver described the disease as follows to an ANKA [ANKARA AGENCY] reporter:

"We found that the goiter so widespread in the area has existed for a long time and that the large majority of the people have it. Despite the large swellings on their throats in almost all of the villagers, they do not consider it a disease, but a normal part of their lives. These citizens came to us with other problems and, although they showed us the painful enlargements, they did not speak of them as goiters because they do not consider goiter a disease."

Animals Not Exempt

It is thought that the origin and development of the disease, known to be caused by local conditions, will be clarified following laboratory tests. Samples were taken from springs, wells and other sources of drinking water in and around Azdavay and were sent to the nuclear medicine institute of the Cerrahpasa Faculty of Medicine in Istanbul.

Meanwhile, nutritional symptoms of the iodine deficiency in the water, thought to be the cause of goiter in the area, were found to affect animals as well as humans. The "New Jersey" type cattle which have been brought into the region

reportedly have a shortened life span and, over time, lose their own characteristics and revert to the local breed.

As the result of health campaigns, the villagers learned that the enlargements on their throats and other parts of their bodies were goiter and asked for assistance. The villagers said that they were always "made fun of" when they went somewhere else because of the abnormal appearance of their throats and that they also suffer shortness of breath and constant nervous tension.

Three-Kilo Goiter

In the Azdavay village of Aslarca, Recep Kahya spoke of the nearly 3-kilogram goiter on his throat as follows:

"I have had this goiter on my throat for as long as I can remember. When I walk fast or climb a hill, it is as though my breath will stop. I often have violent headaches. And as for nerves, I am extremely nervous when I have a headache and I cannot see a thing. I am always bumping into things.

"Before I even said anything, the doctors who examined me asked whether I was nervous, had headaches or was short of breath. I told them I did. They said all this came from the goiter on my throat. I should know where it's from."

"Those Improved by Surgery Get Sick Again If They Live Here"

The villagers say that the number of women who have died in childbirth because they cannot breathe is "a lot," though they cannot give a definite figure. The villagers also note that infant mortality and death in childbirth rates are high in this mountainous region also because midwives cannot get in to attend the birth, especially in the winter months.

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